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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,466	11/09/2001	Glenn A. Rinne	9180-9	9385
20792	7590	05/17/2004	EXAMINER	
MYERS BIGEL SIBLEY & SAJOVEC PO BOX 37428 RALEIGH, NC 27627			EDMONDSON, LYNNE RENEE	
			ART UNIT	PAPER NUMBER
			1725	

DATE MAILED: 05/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/008,466	Applicant(s) RINNE, GLENN A.	
	Examiner Lynne Edmondson	Art Unit 1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 and 24-26 is/are rejected.
- 7) ☒ Claim(s) 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>011303</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 6, 10, 13, 14, 18-22 and 24-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Machler et al. (USPN 4496416).

Machler teaches a method of positioning a component (lens) on a substrate by providing a liquid material to the substrate at a first position and changing a property of the liquid while in a liquid state to move the component to the desired second position while in the liquid state (abstract and col 2 lines 7-28). The liquid is an adhesive or solder (col 2 lines 47-55) which is solidified by heat curing (col 2 lines 8-22). In a soldering process, the liquid would solidify on cooling. The volume and pressure of the liquid material change (col 6 line 60 – col 7 line 30). See also Machler claims 1-4 and 7-10.

3. Claims 1-5, 7, 8, 12, 14, 18 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Takemoto et al. (USPN 6544376 B2).

Takemoto teaches a method of positioning a component on a substrate by providing a liquid material to the substrate at a first position and changing a property of the liquid while in a liquid state to move the component to the desired second position while in the liquid state. The liquid is an epoxy (resin) adhesive which is solidified by heat curing (col 4 lines 1-8 and col 4 lines 51-61). The surface tension of the liquid material changes and different portions of the liquid are heated to different temperatures (col 2 lines 27-38 and col 24 lines 57-67). See also Takemoto claims 1-5.

4. Claims 1-22 and 24-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Burns et al. (US 2002/0172969 A1).

Burns teaches a method of positioning a component (diode, paragraphs 461 and 472) on a substrate by providing a liquid material to the substrate at a first position and changing a property of the liquid while in a liquid state to move the component to the desired second position while in the liquid state (paragraphs 141 and 150-159). The liquid is an epoxy adhesive or solder (paragraphs 47 and 498), which is solidified by heat curing or reflow. In a soldering process, the liquid would solidify on cooling. The surface tension (paragraphs 117 and 229), internal pressure, volume (paragraphs 224-230) and electrical potential (paragraph 48) of the liquid material change. Different portions of the liquid are heated to different temperatures (paragraphs 224-230). A fluid or gas is changed in contact with the liquid (paragraph 448). Multiple wettable areas having different dimensions are present (paragraphs 44 and 226). Volume is increased (paragraph 140).

Allowable Subject Matter

5. Claim 23 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schwar et al. (USPN 5738753, positioned fiber with cured adhesive), Chua et al. (USPN 6439898 B2, positioning with adhesive), Estes et al. (USPN 6410415 B1) and Koopman et al. (USPN 5381946).

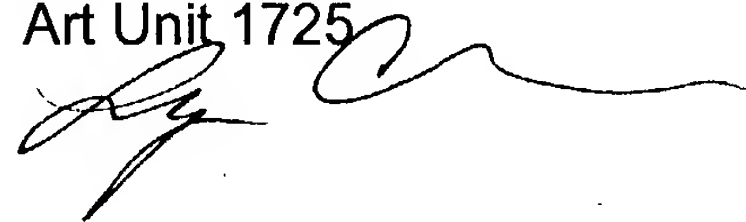
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynne Edmondson whose telephone number is (571) 272-1172. The examiner can normally be reached on Monday through Thursday from 6:30 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1725

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lynne Edmondson
Primary Examiner
Art Unit 1725



5/14/09

LRE